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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,958	11/15/2001	Michael Baentsch	CH920000029	6674

7590 09/08/2005

Casey August  
Intellectual Property Law Dept.  
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EXAMINER

YIGDALL, MICHAEL J

ART UNIT	PAPER NUMBER
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2192

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/003,958

Applicant(s)

BAENTSCH ET AL.

Examiner

Michael J. Yigdall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 4, 2005 has been entered. Claims 17-32 are now pending.

### *Response to Arguments*

2. Applicant's arguments have been fully considered but they are not persuasive.

In response to Applicant's argument that "increasing speed is not the function of the hash function of claims 17, 24 and 29" (Applicant's remarks, page 7, top) and that the "problem solved by applicant's invention is to use a less space-consuming expression of symbolic linking strings" (Applicant's remarks, page 7, bottom), the fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Furthermore, the examiner's conclusion of obviousness is certainly not based upon improper hindsight reasoning if the suggestion to combine the references is not the same problem solved by the present invention. Nonetheless, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

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time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

*Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claim 19 (new), the claim recites that “the parameter is used so that different symbolic linking strings are not mapped to the same linking string” (emphasis added). The specification, however, states that the parameter is used to guarantee that different symbolic linking strings are never mapped to the same token (e.g., page 4, lines 26-29). The token is apparently a linking identifier, rather than a linking string (e.g., page 4, lines 23-26).

With respect to claim 20 (new), the claim recites that “each linking string is a short token.” However, the specification states instead that each linking string is mapped onto a short

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token (e.g., page 4, lines 26-27). The intent was perhaps to recite that --each linking identifier is a short token--.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

With respect to claim 19 (new), the claim recites "the parameter" in line 1. There is insufficient antecedent basis for this limitation in the claim. Base claim 17 does not introduce a parameter.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Pub. No. WO 00/46667 to Schwabe et al. (art of record, "Schwabe") in view of U.S. Pat. No. 5,764,987 to Eidt et al. (art of record, "Eidt").

With respect to claim 17 (new), Schwabe discloses a Java run-time system (see, for example, page 1, lines 27-29, which shows a Java virtual machine or run-time system) comprising:

(a) a stacked-based interpreter for executing a Java program comprising Java bytecode instructions and Java class structures (see, for example, page 6, lines 18-20, which shows an interpreter for executing Java programs, and page 1, lines 19-26, which shows that the programs comprise Java bytecode instructions and class structures);

(b) a converter for mapping standard Java symbolic linking strings contained in a downloaded Java program onto linking identifiers (see, for example, page 8, lines 17-27, which shows a converter for mapping symbolic names or strings to tokens or identifiers); and

(c) an export table for storing linking identifiers generated by the converter to bind a reference in a bytecode instruction to be executed to a corresponding link target (see, for example, page 8, lines 12-15, which shows an export component or table for storing the tokens or identifiers and linking or binding a reference).

Although Schwabe discloses that the converter uses a function to assign the tokens or identifiers to which the symbolic names or strings are mapped (see, for example, page 14, line 27 to page 15, line 7), Schwabe does not expressly disclose the limitation of element (b) wherein the converter is adapted to use a hash function to map the standard Java symbolic linking strings onto the linking identifiers.

However, Eidt discloses symbol import and export tables for linking references to objects in memory at run-time (see, for example, column 2, lines 1-34), wherein a hash function is used to locate the export symbols (see, for example, column 12, lines 5-27). Eidt teaches that hashing

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the export symbols considerably increases the speed of searching for and importing the symbols (see, for example, column 11, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the converter of Schwabe to use a hash function, such as taught by Eidt, so as to increase the speed of mapping the symbolic names or strings to the tokens or identifiers.

With respect to claim 18 (new), the rejection of claim 17 is incorporated, and Eidt further discloses the limitation wherein the converter is adapted to use a parameterized hash function to map the standard Java symbolic linking strings onto linking identifiers, a parameter for the hash function being contained in the Java program to be downloaded (see, for example, column 13, lines 13-35, which shows that the hash function is parameterized with parameters contained in the program).

With respect to claim 19 (new), the rejection of claim 17 is incorporated, and although Eidt discloses a parameterized hash function (see, for example, column 13, lines 13-35), Eidt does not expressly disclose the limitation wherein the parameter is used so that different symbolic linking strings are not mapped to the same linking string.

However, Schwabe further discloses assigning tokens or identifiers in such a way as to ensure that two symbolic names or strings are not mapped to the same identifier (see, for example, page 14, line 27 to page 15, line 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the parameter to ensure that the hash function does not map two symbolic linking strings of the Java program to the same linking identifier, as suggested by Schwabe, so as

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to avoid any penalty that could otherwise result from a hash collision (see, for example, Eidl, column 12, line 66 to column 13, line 2).

With respect to claim 20 (new), the rejection of claim 17 is incorporated, and Schwabe further discloses the limitation wherein each linking string is a short token (see, for example, FIGS. 7A-7C, which shows that the tokens or linking identifiers are short tokens).

With respect to claim 21 (new), the rejection of claim 20 is incorporated, and Schwabe further discloses the limitation wherein the short token is a number (see, for example, page 7, line 33 to page 8, line 3, which shows that the tokens are numerical values).

With respect to claim 22 (new), the rejection of claim 20 is incorporated, and Schwabe further discloses the limitation wherein the short token is a short integer (see, for example, page 12, table, which shows the ranges of the tokens as short integers).

With respect to claim 23 (new), the rejection of claim 23 is incorporated, and Schwabe further discloses the limitation wherein the run-time system is ported on an embedded microcontroller of a smart card (see, for example, page 2, lines 7-17, which shows porting the run-time system on an embedded processor or microcontroller of a smart card).

With respect to claims 24-26 (new), the claims recite a method that corresponds to the system recited in claims 17-19, respectively (see the rejection of claims 17-19 above).

With respect to claim 27 (new), the rejection of claim 25 is incorporated, and Schwabe further discloses the limitation wherein the parameter is calculated by a cap file generator (see,



for example, page 8, lines 17-27, which shows a converter for generating a CAP file, and page 14, lines 6-8, which shows that the converter assigns the tokens or identifiers, and see, for example, page 14, line 27 to page 15, line 7, which shows calculating a current token value or parameter so as to ensure that two symbolic names or strings are not mapped to the same identifier).

With respect to claim 28 (new), the rejection of claim 25 is incorporated, and Schwabe further discloses the limitation wherein the parameter is calculated by checking the symbolic linking strings and varying a start parameter until a parameter is formed that satisfies a requirement that the hash function maps all symbolic linking strings on different linking identifiers (see, for example, page 14, line 27 to page 15, line 7, which shows checking the symbolic names or strings and varying a initial token value or parameter until a current token value or parameter is formed such that all symbolic names or strings are mapped to different tokens or identifiers).

With respect to claims 29 (new), the claim recites a computer-readable medium that corresponds to the system of claim 17 (see the rejection of claim 17 above).

With respect to claim 30 (new), the rejection of claim 29 is incorporated, and Schwabe further discloses the limitation wherein the export table comprises a Java Card export file (see, for example, page 7, lines 3-7, which shows that the export table conforms to the Java Card API and is thus a Java Card export file).

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With respect to claims 31 and 32 (new), the rejection of claim 29 is incorporated, and the claims correspond to claims 18 and 19, respectively (see the rejection of claims 18 and 19 above).

*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

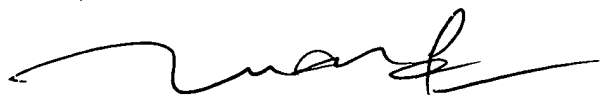
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MY

Michael J. Yigdall  
Examiner  
Art Unit 2192

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**TUAN DAM**  
**SUPERVISORY PATENT EXAMINER**